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Bridging trade statistics with business statistics – Eurostat's experiences of register linkages

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Introduction

1. Merchandise trade statistics and business statistics have been traditionally treated as separate statistical domains, both from the viewpoint of data compilers and data users. Different data sources, methodologies and classifications make their common use complicated. Despite these obvious differences, trade and business statistics have many common features. Bringing them closer to each other can offer new statistics with political and analytical relevance, in particular to analyse the impact of globalisation on businesses.

Identification of enterprises in trade statistics

2. Trade statistics are well-established statistics with a long history. They have a specific and significant role in the framework of economic statistics. They aim at describing trade flows between countries with a breakdown of products. In other words, they show which products each country exports to other countries or imports from other countries and which are the value and volume these goods account for. The methodological framework of trade statistics is built around the main concepts of the product, the partner country and the valuation; other concepts have secondary importance.¹

3. Although there is wealth of information available in public trade statistics, they do not provide explicit information on the traders behind these international transactions. Theoretically it may be possible to associate products with the respective activity sectors with the help of correspondence tables or input-output tables. These approaches, which use macro-level data, are however based on certain assumptions on the natures of products and their manufacturing origin or final use.

4. In reality, the economic activity sector behind trade flow may be different than the one defined through theoretical methods. What is more, economic globalisation may make the macro-level approach even more challenging. For instance, the way how multinational enterprise groups organise their production and supply chains has a strong influence on production and international trade flows. Consequently, the connection between production and trade may become blurred.

¹ For more information on the methodology of European trade statistics, the readers are requested to consult Eurostat webpage <http://ec.europa.eu/eurostat>

5. Another approach to get information on enterprises involved in external trade is to proceed with a micro level data linkages. This means that traders need first to be identified through the identifiers available in trade declarations.

6. Systematic identification of traders is a relatively new concept in the European Statistical system. Before introduction of the European Single Market in 1993 trade statistics used exclusively Customs declarations as the source data. Customs declarations are administrative reports which every trader has to fill. For trade statistics this means that there is no need to establish a survey; hence statistical authorities do not necessarily need to keep a systematic track of traders in order to ensure completeness of data collection.

7. Since 1993, no Customs formalities have been needed in trade between the EU Member States. Data on these intra-EU trade flows has been collected via the Intrastat system. In Intrastat system, statistical data is collected directly from trade operators, which send a summary monthly declaration to the relevant national statistical administration.

8. Intrastat system is based on a close link the VAT system of the intra-EU trade. Every European VAT-registered company, which sells or buys goods to a VAT-registered company located in another EU Member State, needs to report to the national tax authorities on the value of these transactions. Tax authorities must further transmit information on these traders to the statistical authorities.

9. Intrastat system aims to reduce the burden on trade operators as far as possible. In practice it means that smallest traders are exempted from Intrastat reporting. In order to manage the data collection, every EU Member State must keep a register on intra-EU traders. The technical aspects and content of this register are not regulated but because the register forms an important part of the production system of trade statistics, it is normally organised in such a way that it gains the maximum benefit from other information sources and ensures maximum effectiveness of all its functions. The close link to VAT system ensures also that there is one harmonised identification code available: the VAT-code. Some Member States may use other identification codes too.

10. Data on extra-EU trade is collected through Customs declarations. It is not mandatory to keep a register of extra-EU traders in a similar way like in intra-EU trade. Many Member States have nevertheless set up such a register or have a combined register for both intra- and extra-EU traders. There is no uniform identification code in use across the Member States.

11. The business registers play an important role in bringing trade statistics closer to the business statistics. The key concept in this aspect is the definition of statistical unit: there is no explicitly defined statistical unit in external trade statistics while in business statistics it is always defined.

12. It is important to notice that from the perspective of concepts applied in business registers and business statistics in general, the identification codes used in trade data - Intrastat reports or Customs declarations – refer to administrative units. Therefore linking these administrative units into an appropriate statistical unit is a necessary first step. According to the Business Register Regulation², the business registers need to keep a track on these linkages. Thus, the methodological and legal basis for linkage exists.

² Regulation (EC) No 177/2008, replacing (EEC) No 2186/93.

Standardisation Exercise: Eurostat's experiences in compiling trade statistics by enterprise characteristics.

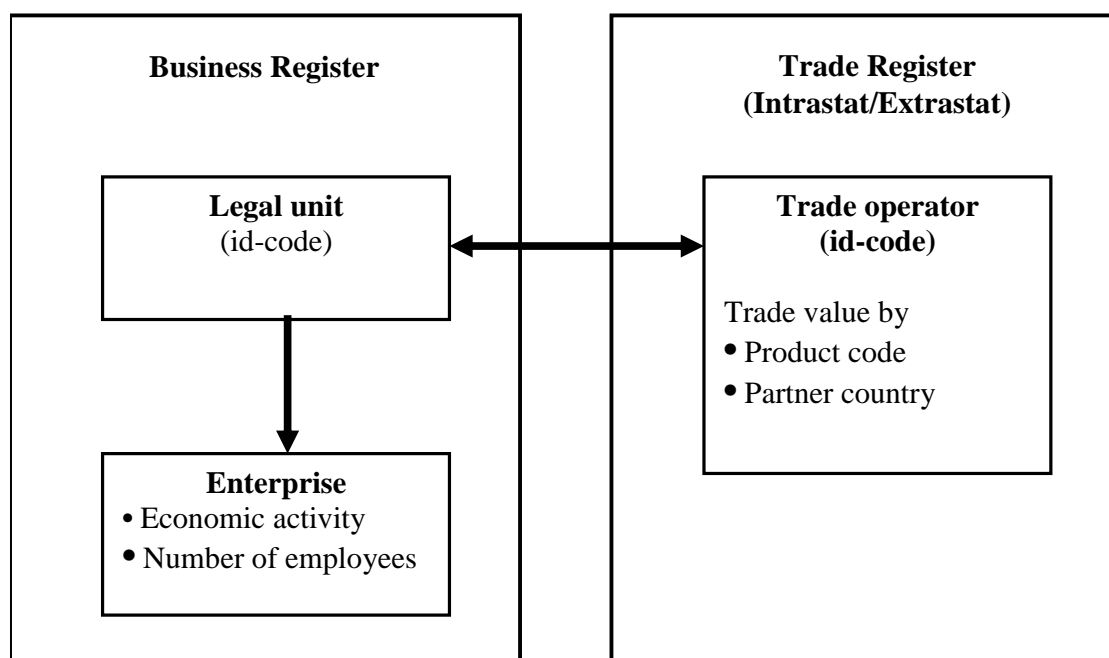
13. As stated above, the establishment of Intrade system in 1993 set up a basis for systematic recording of traders. At the same time, the business registers were harmonised through the introduction of the Business Register Regulation.

14. In mid-1990s, Eurostat set up Task-Force to develop linkages between trade and business registers and to develop new indicators based on this linkage. After some early feasibility studies, the start of Edicom programme in 2001 gave a real momentum to concrete actions.

15. The first centralised pilot study called "Standardisation Exercise" was launched in 2002. The main objective of the study was to test the feasibility to obtain information on profiles of European traders by using harmonised methodology, classifications and breakdowns.

16. At theoretical level, the methodology of the study can be simplified into following format. First, a linkage between trade operators in trade register and legal units in business registers is established. Second, trade value of each trader, by product code and partner country, is combined with main enterprise characteristics retrieved from the business register. Third, specific indicators are calculated according to given breakdowns.

Figure 1: Link between trade operators and statistical units



17. This micro level approach has several attractive properties:

- No need for additional data collection.
- Consistent and coherent definition of statistical units.
- Detailed level of trade data can be maintained.
- Business registers have the most important economic variables available (economic activity, number of employees, turnover)
- The method can be extended to cover all statistics related to businesses

18. Thus far, four pilot studies have been completed for reference years 1999, 2002, 2003 and 2005.³

19. The indicators, breakdowns and processing rules have evolved over time. Currently there are six indicators for intra- and extra-EU trade separately:

- Matching trade and business registers
- Trade by economic activity and employment size-class
- Concentration of trade by economic activity
- Trade by economic activity and by partner countries or zones
- Trade by economic activity and by number of partner countries
- Trade by economic activity and by products

Data are collected both in terms of trade value and number of enterprises.

20. The results of the last two studies are available in a public Circa site:

http://circa.europa.eu/Public/irc/dsis/trade/library?l=/basic_documentation/characteristics&vm=detail&sb=Title

21. Quality of statistics based on register linkage depends very much on the matching rates between source data sets. The results from the four data collection rounds have shown that in most cases the matching rates have been excellent, in particular when measured in terms of trade value.⁴ It is typical that the matching rates are higher in intra-EU trade than in extra-EU trade. There are three main reasons for this. First, as said above, the recording of traders in intra-EU trade is obligatory so Member States have well-established register systems on intra-EU traders. Second, smallest traders are exempted from Intrastat reporting so the scope of register matching is limited to traders whose volume of trade is relatively high. Third, for extra-EU trade it is possible in some cases to lodge a Customs declaration in another Member State than the one where the trader is resident. These non-resident traders do not belong to the target population of the business register of the given Member State so they cannot be matched. Other reasons for unsuccessful matching are the use of different identification codes, differences in the target population (agriculture, public administration, private individuals) or differences in updating of registers.

Next steps

22. The revised legal basis for intra- and extra-EU trade statistics will include a requirement to compile annual statistics on trade by business characteristics, based on linkages to business registers. It is foreseen that the Regulation on intra-EU trade statistics will enter into force in 2009 and the Regulation on extra-EU trade statistics in 2010. The first reference year covered by the legal act will be the year when the legal acts enter into force.

23. Before the adaptation of legal acts, data collection will continue on voluntary basis. The objective is to launch studies annually so that consistent data would be available from the reference year 2005 onwards. Changes to requested data (indicators, classifications and breakdowns) should be limited to necessary ones only as this would allow, on the one hand, to focus on the qualitative improvement, and on the other hand, to analyse development over time.

24. Data collection for reference year 2006 started in November 2008. The results are expected to be ready in summer of 2009.

³ For more details of the history, see papers STD/SES/WPTGS(2008)13, STD/NAES/TASS/ITS(2007)15, STD/NAES/TASS/ITS(2006)26 and STD/NAES/TASS/ITS(2005)13.

⁴ Indicator "Matching trade and business registers" measures the quality of matching.

25. Further development work will be conducted in the frame of Modernisation of European Enterprise and Trade Statistics (MEETS) programme⁵. This 5-year programme aims at financing development of business and trade statistics so that they can react to changes in the world economy combined with reduction of administrative burden on businesses.

26. One of the objectives of the MEETS programme is to identify new areas where micro-data linkages between trade and business statistics could be feasible and interesting. Some possible issues to study are to expand current framework to cover also other variables stored in the business registers or in the Structural Business Statistics. This would provide a more complete analytical framework on the production, consumption and demography of business population. Another issue to study is to analyse to which extent this same approach could be expanded to cover also trade of services.

27. The new Business Register Regulation makes the recording of enterprise groups obligatory. Identification and construction of multinational enterprise groups will be coordinated through the EuroGroups Register. The implementation of the EuroGroups Register will give new possibilities for register linkages. For trade statistics it allows to link traders directly to enterprise groups – domestically or foreign controlled. Thus, it would be possible to calculate key globalisation indicators in harmonised way, without additional data collection.

⁵ See paper STD/NAES/TASS/ITS(2007)19 for details.